

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) A storage system- device comprising:

a plurality of storage mediums for storing data;

a plurality of ~~storage devices~~ disk drives each including one of said a storage mediums ~~medium~~ for storing data;

a disk controller for controlling said ~~plurality of storage devices~~ disk drives; and

means for notifying ~~an~~ a first external device of a change in data stored in a specific one of said ~~plurality of storage~~ mediums.

wherein said change in data stored in said specific one of said storage mediums is performed under control of a second external device ~~devices~~, and both of said external device ~~devices are being connected~~ to said controller.

2. (currently amended) The storage system- device as claimed in claim 1, further comprising:

an interface for externally selecting said specific one of said ~~plurality of storage devices~~ mediums,

wherein said change in said data stored in said specific one of said ~~plurality of storage devices~~ mediums is ~~to be notified~~ to said first external device.

Claims 3 and 4 (canceled).

5. (currently amended) A computer system comprising:

a connecting device for ~~transmitting/receiving~~ transmitting a control signal and data ~~to/from~~ to a storage system device, and for receiving said control signal and data from said storage device, said connecting device being connected to said storage system device; and

an interface for receiving a notification from said storage device indicating that data stored in a specific storage device medium within said storage system device has been changed by an external device,

wherein said storage system device being connected to said interface through said connecting device, and said external device being connected to said interface through said connecting device.

6. (currently amended) The computer system as claimed in claim 5, further comprising:

an interface for selecting said a storage device from which is to receive a notification indicating that data has been changed is to be received, and indicating a said-selected storage device medium within said storage device to said storage system device.

Claim 7 is canceled.

8. (currently amended) A data control method for duplicating data in a system which includes, ~~said system comprising:~~ a primary system including a first computer system and a first storage system device connected to said first

computer system₁ and a secondary system including a second computer system and a second storage ~~system~~ device connected to said second computer system₁, wherein at least said first storage ~~system~~ device and said second storage ~~system~~ device are connected to each other₁; said data control method comprising the steps of:

into a specific ~~storage device~~ disk drive within said first storage ~~system~~ device, registering (~~storing~~) a log based on which an update of data stored in said first storage ~~system~~ device can be recreated, said data being produced as a result of processing performed by said first computer system;

copying said log registered in said specific ~~storage device~~ disk drive within said first storage ~~system~~ device to a specific ~~storage device~~ disk drive within said second ~~system~~ device, said specific ~~storage device~~ disk drive within said second storage ~~system~~ device being set to duplicate said log;

updating said data stored in said first storage ~~system~~ device, said data being produced as a result of said processing performed by said first computer system;

notifying said second computer system of a change in data stored in said specific ~~storage device~~ disk drive within said second storage ~~system~~ device, said change being made as a result of performing said copying step;

reading said change in said data stored in said specific ~~storage device~~ disk drive within said second storage ~~system~~ device, this step being performed by said second computer system; and

updating a duplicate of said data₁ (~~stored in said first storage system device~~)₁ based on a log read by said second computer system, said duplicate of said data being stored in said second storage ~~system~~ device.

9. (currently amended) The data control method as claimed in claim 8, wherein said log based on which said update of said data stored in said first storage ~~system~~ device can be recreated includes one or a plurality of transactions and information for specifying a start and an end of each transaction, said data being produced as a result of said processing performed by said first computer system;

10. (currently amended) The data control method as claim in claim 8, wherein into said specific ~~storage device~~ disk drive within said first storage ~~system~~ device, said registering step registers said log based on which said update of said data stored in said first storage system can be recreated, in log input/output units specified by said first computer system, said data being produced as a result of said processing performed by said first computer system.

11. (currently amended) The data control method as claimed in claim 8, wherein:

said registering step and said copying step are performed in synchronization with each other;

into said specific storage device within said first storage system, said registering step registers said log based on which said update of said data stored in said first system can be recreated, said data being produced as a result of said processing performed by said first computer system; and

said copying step copies said log registered in said specific storage device disk drive within said first storage system to said specific storage device disk drive within said second storage system device, said specific storage device disk drive within said second storage system device being set to duplicate said log.

12. (currently amended) The data control method as claimed in claim 8, wherein said notifying step notifies said second computer system of said change in said data stored in said specific storage device disk drive within said second storage system device at regular time intervals.

13. (currently amended) The data control method as claimed in claim 8, wherein said notifying step notifies said second computer system of said change in said data stored in said specific storage device disk drive within said second storage system device by controlling said second storage system device through an interface for controlling said second storage system device from said first storage system device.

14. (currently amended) The data control method as claimed in claim 13, wherein said control of said second storage system device is performed according to an instruction from said first computer system.

15. (currently amended) The data control method as claimed in claim 8, further comprising steps of:

detecting shutdown of said first computer system; and

taking over application processing from said first computer system, ~~this step being performed by said second computer system.~~

16. (currently amended) The data control method as claimed in claim 8, further comprising steps of:

detecting shutdown of said first computer system;

taking over application processing from said first computer system, ~~this step being performed by said second computer system; and~~

~~reading, by said second computer system, a log from said specific storage device disk drive within said second storage system device and updating data based on said read log, this step being performed by said second computer system.~~

17. (currently amended) The data control method as claimed in claim 15, further comprising steps of:

restoring said first computer system after said second computer system has taken over said application processing; and

switching the functions of said primary system and said secondary system so as to create a duplicate of a database stored in said second storage system device and store said duplicate in said first storage system device.

18. (currently amended) A data control method for duplicating data in a system which includes, ~~said system comprising: a primary system including a first computer system and a first storage system device connected~~

to said first computer system; and a secondary system including a second computer system and a second storage ~~system~~ device connected to said second computer system; wherein at least said first storage ~~system~~ device and said second storage ~~system~~ device are connected to each other; said data control method comprising the steps of:

into a specific ~~storage device~~ disk drive within said first storage ~~system~~ device, storing a log based on which an update of data stored in said first storage ~~system~~ device can be recreated, said data being produced as a result of processing performed by said first computer system;

copying said log stored in said specific ~~storage device~~ disk drive within said first storage system to a specific ~~storage device~~ disk drive within said second storage ~~system~~ device, said specific ~~storage device~~ disk drive within said second storage ~~system~~ device being set to duplicate said log;

updating said data stored in said first storage ~~system~~ device, said data being produced as a result of said processing performed by said first computer system;

detecting a change in data stored in said specific ~~storage device~~ disk drive within said second storage ~~system~~ device, said change being made as a result of performing said copying step, ~~this detecting step being performed by~~ said second computer system;

~~reading, by said second computer system, said change in said data stored in said specific storage device disk drive within said second storage system device, this step being performed by said second computer system;~~
and

reading, by said second computer system, a log and updating a duplicate of said data, (stored in said first storage system device), based on said log, said duplicate being stored in said second storage system device; ~~this step being performed by said second computer system.~~

19. (currently amended) The data control method as claimed in claim 18, wherein said log based on which said update of said data stored in said first storage system device can be recreated includes one or a plurality of transactions and information for specifying a start and an end of each transaction, said data being produced as a result of said processing performed by said first computer system.

20. (currently amended) The data control method as claimed in claim 18, wherein into said specific storage ~~device~~ disk drive within said first storage ~~system device~~, said registering step registers said log based on which said update of said data stored in said first storage system device can be recreated, in log input/output units specified by said first computer system, said data being produced as a result of said processing performed by said first computer system.

21. (currently amended) The data control method as claimed in claim 18, wherein:

said registering step and said copying step are performed in synchronization with each other;

into said specific ~~storage device~~ disk drive within said first storage system ~~device~~, said registering step registers said log based on which said update of said data stored in said first storage system device can be recreated, said data being produced as a result of said processing performed by said first computer system; and

said copying step copies said log registered in said specific storage device ~~disk drive~~ within said first storage system ~~device~~ to said specific storage device ~~disk drive~~ within said second storage system ~~device~~, said specific storage device ~~disk drive~~ within said second storage system ~~device~~ being set to duplicate said log.

22. (currently amended) The data control method as claimed in claim 18, further comprising steps of:

detecting shutdown of said first computer system; and

taking over, by said second computer system, application processing from said first computer system, ~~this step being performed by said second computer system.~~

23. (currently amended) The data control method as claimed in claim 18, further comprising steps of:

detecting shutdown of said first computer system;

taking over, by said second computer system, application processing from said first computer system, ~~this step being performed by said second computer system;~~ and

reading, by said second computer system, a log from said specific storage device disk drive within said second storage system device and updating data based on said read log, ~~this step being performed by said second computer system.~~